REMARKS

Claims 1-7 and 10 are amended. Claims 1, 4, 7 and 10 are amended to clarify that the isolated nucleic acid molecule or nucleic acid sequence "encodes a polypeptide that reduces NF-$_K$B-sensitive reporter activity in Cos cells." Support for this amendment is found in the specification, e.g., at page 10, line 14, page 10, lines 21-22, page 18, lines 24-27, page 20, lines 8-17 and page 51, lines 24-25.

Claims 1 and 10 are further amended to recite "greater than" 500 nucleotides. Support for this amendment is found in the specification, e.g., at page 3, lines 3-4. Claim 1 is further amended to delete subpart "v".

Claims 2, 3, 5 and 6 are amended for grammatical purposes only.

Claim 39 is new. Support for this claim is found in the specification, e.g., at page 10, lines 21-22, page 51, lines 24-25 and Claim 1 as originally filed.

Claim 8 is canceled.

No new matter is added.

Rejection of Claim 7 Under 35 U.S.C. § 112, First Paragraph

Claim 7 is rejected by the Examiner under 35 U.S.C. § 112, first paragraph because "the disclosure is not sufficient to show that a skilled artisan would recognize that the applicant was in possession of the claimed invention" (Office Action, page 4). In particular, the Examiner asserts that the genus "embraces sub-sequences that are unknown and include unsequenced polynucleotides, whose function is yet to be determined" (Office Action, page 4).

Applicants respectfully disagree. Claim 7, as amended, defines the isolated nucleic acid molecule as encoding a polypeptide that reduces NF-$_K$B-sensitive reporter activity in Cos cells. In addition, the person of skill in the art understands the technique of hybridization, and Applicants have provided the sequence information for SEQ ID NOS: 1 and 2. Claim 7, as amended, does not "embrace subsequences whose function is yet to be determined". Instead, only those sequences that encode a polypeptide that reduces NF-$_K$B-sensitive reporter activity in Cos cells are encompassed. A person of skill in the art would readily appreciate that Applicants

were in possession of the claimed invention at the time of filing of the application. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claim 7 Under 35 U.S.C. § 112, First Paragraph

Claim 7 is rejected by the Examiner under 35 U.S.C. § 112, first paragraph for failing to meet the enablement requirement. In particular, the Examiner asserts that the genus of nucleic acids encompassed by Claim 7 "encompasses a potentially huge number [of] polynucleotides" (Office Action, page 5).

Applicants respectfully disagree. Claim 7, as amended, only encompasses those isolated nucleic acid molecules that hybridize under high stringency to: SEQ ID NO: 1; the complement of SEQ ID NO: 1; or a nucleic acid which encodes SEQ ID NO: 2; and which encode a polypeptide that reduce NF-$_K$B-sensitive reporter activity in Cos cells. The specification as filed details hybridization conditions (see, e.g. page 20, line 18-page 21, line 4) and describes a method to determine NF-$_K$B-sensitive reporter activity in Cos cells (see, e.g., page 51, lines 14-25). Thus, a person of skill in the art would readily know how to make and use an isolated nucleic acid molecule which hybridizes under high stringency to SEQ ID NO: 1, the complement of SEQ ID NO: 1, or a nucleic acid which encodes SEQ ID NO: 2, and which encodes a polypeptide that reduces NF-$_K$B-sensitive reporter activity in Cos cells. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 1-2 and 4-5 Under 35 U.S.C. § 102(b)

Claims 1, 2, 4 and 5 are rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by Lamerdin *et al.*. In particular, the Examiner asserts that "the sequence taught by Lamerdin et al. teaches an isolated nucleic acid molecule consisting of a nucleic acid sequence selected from... a nucleic acid that encodes SEQ ID NO: 2" (Office Action, page 8).

Applicants respectfully disagree. As a preliminary matter, Applicants note that "a nucleic acid sequence that encodes SEQ ID NO: 2" has been deleted from Claim 1. The substantially same subject matter is now presented in new Claim 39. Lamerdin *et al.*, discloses a 39,146 base, single-stranded DNA sequence. This sequence does not consist of or comprise a nucleic acid sequence that encodes SEQ ID NO: 2 because the Lamerdin *et al.* sequence needs to be

manipulated into the reverse and complementary sequence before it encompasses Applicants' SEQ ID NO: 1. The Examiner asserts that "the reverse complement of a GenBank DNA sequence is inherent in the sequence" (Office Action, page 8). Applicants disagree. A person of skill in the art did not routinely, at the time the application was filed, appreciate and thus be taught, that a sequence, if reversed and converted to a complement sequence and translated, may result in another polypeptide sequence. There is no teaching in Lamerdin *et al.* of performing any or all of these steps. In addition, there is no teaching in Lamerdin *et al.* that the encoded polypeptide would reduce NF-$_K$B-sensitive reporter activity in Cos cells. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 1-6 Under 35 U.S.C. § 103(a)

Claims 1-6 are rejected by the Examiner under 35 U.S.C. § 103(a) as being obvious in view of Lamerdin *et al.*

Applicants respectfully disagree. Claims 1 and 4 (and thus the claims dependent thereon), as amended, are generally directed to an isolated acid molecule which encodes a polypeptide that reduces NF-$_K$B-sensitive reporter activity in Cos cells. There is no teaching or suggestion of this activity by Lamerdin *et al.* Thus, Claims 1-6 cannot be obvious in view of Lamerdin *et al.* Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 10-12 Under 35 U.S.C. § 103(a)

Claims 10-12 are rejected by the Examiner under 35 U.S.C. § 103(a) as being obvious in view of Lamerdin *et al.*

Applicants respectfully disagree. Claim 10, and thus Claims 11 and 12 which are dependent thereon, as amended, are directed to a vector or plasmid comprising a nucleic acid sequence which encodes a polypeptide that reduces NF-$_K$B-sensitive reporter activity in Cos cells, or a host cell comprising said vector or plasmid. There is no teaching or suggestion of this activity by Lamerdin *et al.* Thus, Claims 10-12 cannot be obvious in view of Lamerdin *et al.* Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 7 and 8 Under 35 U.S.C. § 102(b)

Claims 7 and 8 are rejected under 35 U.S.C. § 102(b) as being anticipated by Neto *et al.* (PNAS 97(7): 3491-3496 (2000)).

Applicants respectfully disagree. As a preliminary matter, Applicants note that Claim 8 has been canceled, thereby rendering the rejection of this claim moot. With regards to Claim 7, the 182 nucleotide DNA sequence taught by Neto *et al.* would only hybridize to an intronic sequence of SEQ ID NO: 1 and thus cannot encode a polypeptide that reduces NF-$_K$B-sensitive reporter activity in Cos cells. Thus, Neto *et al.* does not anticipate Claim 7. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of Claims 1-3 Under 35 U.S.C. § 112, First Paragraph

Claims 1-3 are rejected by the Examiner under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner asserts that "Claim 1 recites 'at least about 500 nucleotides in length' in parts iii and iv. The specification does not have support for this language" (Office Action, page 13).

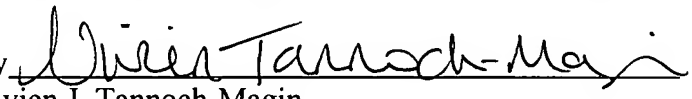
Applicants respectfully disagree. There is no *in haec verba* requirement for newly added claim limitations when there is express, implicit or inherent support in the disclosure (see, e.g. MPEP § 2163 at page 2100-168, Eighth Ed., August 2006 Revision). However, to expedite prosecution, Applicants have amended Claim 1, as noted above. Furthermore, a person of skill in the art would readily appreciate that Applicants were in possession of their invention at the time the application was filed. Applicants' specification provides sequence information for SEQ ID NO: 1 and details these activities of the encoded peptides (see, e.g. Example 5). Thus, the specification as filed adequately demonstrates Applicants' possession of an isolated nucleic acid molecule consisting of SEQ ID NO: 1, the complement of SEQ ID NO: 1, a portion of SEQ ID NO: 1 which is more than 500 nucleotides in length and a portion of the complement of SEQ ID NO: 1 which is more than 500 nucleotides in length, wherein the isolated nucleic acid molecule encodes a polypeptide that reduces NF-$_K$B-sensitive reporter activity in Cos cells. Reconsideration and withdrawal of the rejection are respectfully requested.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

By 

Vivien J. Tannoch-Magin
Registration No. 56,120
Telephone: (978) 341-0036
Facsimile: (978) 341-0136

Concord, MA 01742-9133

Date: June 15, 2007